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**Volume 2 Issue-7, June 2015, ISSN: 2347-6389 (Online)**
Published By: Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd.

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**Paper Title:**
Hidden Markov Model (HMM) in Support of Intellectual Property Risk Management

**Abstract:**
An important element of intellectual property (IP) risk management is valuation, forecasting and strategy. Forecasting the optimal likelihood probabilities for the risk can be an audacious exercise, but it is critical in understanding the optimal damage that can be caused by infringement, IP rights litigations etc providing the basis for prioritizing risk management activities and allocating resources. In this paper the occurrence, interactions of risk events as it impacts intellectual property management is modeled as Hidden Markov Model (HMM). The paper presents the HMM as a tool that can be used to optimize IP risk management response. The paper developed a HMM that can be used to predict the maximum likelihood probability for IP risk. This gives substantial information for optimal planning & coordination of IP risk response activities.

**Keywords:** IP, risk management, HMM maximum likelihood probabilities, IP risk features.

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Varsha Gautam

**Paper Title:**
Protracted Network: Quality of Service

**Abstract:**
The capability of a system to continuously deliver services in compliance with the given requirements in the presence of failures and other undesigned events, is a property of protracted network. An easy solution to provide good quality of service is to build a network with enough capacity. A strong network should have a important property  that the network should be designed in such away that it must take no time or very small time to recover from a big disaster. The objective of this paper is to provide an overview of network connectivity in relation to network protection design. In this paper we aim to introduce and analyze the advantages and disadvantages of methods and algorithms for searching good network connectivity as well as sets of disjoint and distinct paths for protection design. Here we will make 2-connected network to improve network performance.

**Keywords:** Graph theory, network connectivity, survivability

**References:**
Nanohydroxy Apatite/Activated Carbon as Supported Liquid Membrane for Fission Products

Abstract: The study of permeability of $^{137}$Cs, $^{90}$Sr and $^{60}$Co from nitrate media was carried out using Nanocomposite hydroxy apatite/activated carbon. The efficiency of this extractant was studied under various experimental conditions, such as aqueous pH, NaNO$_3$M present in the initial aqueous feed. Nanocomposite hydroxy apatite as carrier in the membrane disc, EDTA as stripping phase concentration, temperature and time of extraction were studied. The percentage of $^{137}$Cs, $^{90}$Sr and $^{60}$Co extraction decreases with the increase of temperature at varying concentration of Nanocomposite hydroxy apatite. The pertraction of $^{137}$Cs, $^{90}$Sr and $^{60}$Co from nitrate media were examined at the optimized conditions. Under the optimum experimental conditions 98.6–99.9% of $^{137}$Cs was extracted in 10–30 min with the initial feed concentration of 0.5 NaNO$_3$. This study was developed using a new nanohydroxyapatite–Activated carbon. The nanohydroxyapatite (nHAP) particles mixed with Activated Carbon (AC) acts as the inorganic phase was mixed with activated carbon (AC) forming HAP-AC composite. Facilitated transport supported liquid membranes (SLMs) were prepared at 200°C temperature. Recently novel compositions in this system HAP-AC were described and characterized with regard to DTO, SEM, IR, surface investigated and spectra. The process of diffusion in liquid membranes is governed by chemical diffusion process. Fick’s first law of diffusion.

Keywords: NHAP: - AC, - AC, DTA, SEM, IR, surface investigated and spectra.

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Application of Phase-Change Materials in Buildings: Case Study Al Khobar City, Saudi Arabia

Abstract: Phase-Change Materials (PCMs) are substances with a high heat of fusion that melt and solidify at a certain temperature range. They are capable of storing and releasing large amounts of energy and have a high capacity of storing heat. PCMs prevent energy loss during material changes from solid to liquid or liquid to solid. They have several advantages such as its self-nucleating properties, and disadvantages such as having low thermal conductivity [4]. There are different types of PCM with a wide range of applications. This paper studies the potential application of PCMs in building energy conservation materials. The analysis shows that the use of BioPCM material as an insulation layer in buildings can decrease the cooling load by 20% in comparison to a standard one. In addition, this research reviews the program performance to date through conducting a survey to evaluate the HVAC energy consumption efficiency in Residential and Commercial Buildings in Al Khobar City, Saudi Arabia. Forty Buildings were surveyed in October 2014. The survey results showed that fifty percent of the buildings don’t have insulation and their HVAC systems were more than 10 years old and with lower efficiencies.

Keywords: Phase-Change Materials, Energy Consumption, Cooling Load, Insulation Material

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Authors: Indrayani Joshi, Asmita Kale

Paper Title: Study of Influence of Cultural Values on the Shaping of a Cultural Landscape with Case of Alandi

Abstract: Landscape is a formal expression of the numerous relationships existing in a given period between the individual or a society and a topographically defined territory, the appearance of which is the result of the action, over time, of natural and human factors and of a combination of both. Study of the cultural values in landscape serves several different ends simultaneously and apart from its function of systematic description it provides for regional classification, affords insight into the role of man in geographic transformations and throws light upon certain aspects on cultural communities in themselves. Cultural landscapes fall in the category of landscapes which have been formed due to nature-human interaction and understanding of co-existence and co-dependence. These are shaped owing to the cultural value systems in the form of various practices and rituals.

Keywords: numerous relationships existing, topographically defined territory, regional classification, geographic transformations, Cultural landscapes, nature-human interaction.

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8. Pg 118, Objects of worship in south-asian religions: Forms, practices and meanings. Edited by Knut A. Jacobsen, Mikael Aktor, Kristina Myrvold